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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,027	02/18/2004	Lynton R. Burchette	IMG.024	2835
26984	7590	12/07/2005	EXAMINER	
WILLIAM L. LONDON 3010 LEE AVENUE P.O. BOX 152 SANFORD, NC 27330			WALSH, RYAN D	
			ART UNIT	PAPER NUMBER
			2852	

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/781,027	BURCHETTE ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Ryan D. Walsh	2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9-2-2005</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Information Disclosure Statement*

The information disclosure statement filed September 2, 2005 fails to comply with 37 CFR 1.98(a)(2), which requires a **legible copy of each cited foreign patent document**; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

### *Response to Arguments*

Applicant's arguments, see page 6, lines 11-30, and page 7, lines 1-2, filed November 16, 2005, with respect to the rejection(s) of claim(s) 1-3, 8-11, and 13-16 under 35 U.S.C. 102(b) as being anticipated by Sakai et al. (US Pub. 2002/0122673), and claims 4-7, 12 and 17-20 under 35 U.S.C. 103(a) as being unpatentable over Sakai in view of Isobe et al. (US Pub. 2003/0123889) have been fully considered and are persuasive. Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection are made in view of Honda et al. (US Pat. # 5,636,009). See the rejections below for application of this reference.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 8-11, and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakai et al. (US PUB 2002/0122673) in view of Honda et al. (US Pat. # 5,636,009)..

Regarding claim 1, Sakai et al. teach, "A method of controlling toner consumption comprising: providing a toner cartridge comprising toner (8d) and electrical development components (6,7 and8); consuming a portion of said toner by printing a plurality of images while a voltage is applied to at least one of said electrical development components (toner is being used when development is occurring during image formation); determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3); and when the predetermined amount of toner remains in the toner cartridge, altering the amount of toner consumed to form images by changing the voltage level applied to at least one of the electrical development components (paragraph [0068], Ln. 3)." Sakai et al. do not teach, "changing the voltage level applied to at least one of the electrical development components during image formation." However, Honda et al. teach, varying the voltage applied to a charging roller, during image formation (see Col. 18, Ln. 65-67 & Col. 19, Ln. 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakai et al. invention to include changing the voltage level applied to at least one of the electrical development components during image formation.

The ordinary artisan would have been motivated to modify Sakai et al. invention in a manner described above for at least the purpose of preventing contamination of a charging roller and improving the durability of the latent image carrier.

Regarding claim 2, Sakai et al. teach, "wherein altering the amount of toner consumed further comprises reducing the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 3, Sakai et al. teach, "wherein altering the amount of toner consumed further comprises increasing the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 8, Sakai et al. teach, "A toner cartridge comprising: toner (inside of 8d); electrical development components (6,7 and 8) consuming a portion of said toner by printing a plurality of images while a first voltage is applied to at least one of the electrical development components (toner is being used when development is occurring during image formation); and an electronic circuit storing (41, and Paragraph [0067], Ln. 3-15) an indication of the amount of toner remaining, said circuit further storing a value controlling the voltage applied to the at least one of the electrical development components, said electronic circuit determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3), said electronic circuit altering the amount of toner consumed to form images, when the predetermined amount of toner remains in the toner cartridge (paragraph [0068], Ln.

3)." Sakai et al. do not teach, "by applying a second voltage, different from the first voltage, to the at least one of the electrical development components when printing additional images." However, Honda et al. teach, varying the voltage applied to a charging roller, during image formation (see Col. 18, Ln. 65-67 & Col. 19, Ln. 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakai et al. invention to include applying a second voltage, different from the first voltage, to the at least one of the electrical development components when printing additional images.

The ordinary artisan would have been motivated to modify Sakai et al. invention in a manner described above for at least the purpose of preventing contamination of a charging roller and improving the durability of the latent image carrier.

Regarding claim 9, Sakai et al. teach, "wherein the electronic circuit alters the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 10, Sakai et al. teach, "wherein the electronic circuit reduces the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 11, Sakai et al. teach, "wherein the electronic circuit increases the amount of toner consumed to form images by decreasing the voltage applied to a

primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089]).”

Regarding claim 13, Sakai et al. teach, “A toner cartridge comprising: toner (inside of 8d); electrical development components (6,7 and 8) consuming a portion of said toner by printing a plurality of images while a first voltage is applied to at least one of the electrical development components (toner is being used when development is occurring during image formation); and circuitry means (41, and Paragraph [0067], Ln. 3-15) for storing an indication of the amount of toner remaining, said circuitry means further for storing a value controlling a voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3-15), said circuitry means for determining when a predetermined amount of the toner remains in the toner cartridge (paragraph [0068], Ln. 1-3), said circuitry means for altering the amount of toner consumed to form images, when the predetermined amount of toner remains in the toner cartridge (paragraph [0068], Ln. 1-3).” Sakai et al. do not teach, “by applying a second voltage, different from the first voltage, to the at least one of the electrical development components when printing additional images.” However, Honda et al. teach, varying the voltage applied to a charging roller, during image formation (see Col. 18, Ln. 65-67 & Col. 19, Ln. 1-2). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Sakai et al. invention to include applying a second voltage, different from the first voltage, to the at least one of the electrical development components when printing additional images.

The ordinary artisan would have been motivated to modify Sakai et al. invention in a manner described above for at least the purpose of preventing contamination of a charging roller and improving the durability of the latent image carrier.

Regarding claim 14, Sakai et al. teach, "wherein the circuitry means is for altering the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 15, Sakai et al. teach, "wherein the circuitry means is for reducing the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 16, Sakai et al. teach, "wherein the circuitry means is for increasing the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

Claims 4-7, 12, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Sakai et al. (US Pub 2002/0122673) and Honda et al. (US Pat. # 5,636,009), as applied to claim 1 above, in view of Isobe et al. (US Pub 2003/0123889).

Regarding claim 4, the combination of Sakai et al. and Honda et al. do not teach, "wherein the toner cartridge comprises an electronic module, the method further



comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining.” However, wherein the toner cartridge comprises an electronic module, the method further comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining is routine in the art as shown by Isobe et al. (see paragraph [0021], Ln. 2-4 and paragraph [0020]). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the combination of Sakai et al and Honda et al.’s inventions to include a toner cartridge that comprises an electronic module, the method further comprising, after the step of providing, the step of: replacing the electronic module with a replacement electronic module, wherein said replacement module stores an indication of the amount of toner remaining.

The ordinary artisan would have been motivated to modify the combination of Sakai et al. and Honda et al.’s inventions in a manner described above for at least the purpose of having the ability to replenish the toner in a timely fashion.

Regarding claim 5, Sakai et al. teach, “wherein the replacement electronic module stores a value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3-15).”

Regarding claim 6, Sakai et al. teach, “wherein altering the amount of toner consumed further comprises replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value

controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3)."

Regarding claim 7, Sakai et al. teach, "further comprising reading the new value by the printer holding the toner cartridge (paragraphs [0048]-[0049])."

Regarding claim 12, the combination of Sakai et al. and Honda et al. do not teach, "wherein the electronic circuit is a replacement electronic circuit replacing an original electronic circuit." However, wherein the electronic circuit is a replacement electronic circuit replacing an original electronic circuit is routine in the art as shown by Isobe et al. (see Paragraph [0021], Ln. 2-4). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify, the combination of Sakai et al. and Honda et al.'s inventions to include an electronic circuit that is a replacement circuit, replacing an original electronic circuit.

The ordinary artisan would have been motivated to modify the combination of Sakai et al. and Honda et al.'s inventions in a manner described above for at least the purpose of delaying developer usage to make its use more available.

Regarding claim 17, the combination of Sakai et al. and Honda et al. teach, "toner (Sakai, inside of 8d) and electrical development components (Sakai, 6,7 and 8) consuming a portion of said toner by printing a plurality of images while a voltage is applied to at least one of said electrical development components (toner is being used when development is occurring during image formation), electronic circuitry (Sakai, 41, and paragraph [0067], Ln. 4-5) storing an indication of the amount of toner remaining, said circuit further storing a value controlling the voltage applied to the at least one of

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the electrical development components, said electronic circuit determining when a predetermined amount of the toner remains in the remanufactured toner cartridge (Sakai, paragraph [0068], Ln. 1-3), said electronic circuit altering the amount of toner consumed to form images by changing the voltage level applied to at least one of the electrical development components when additional images are printed (Honda et al., see Col. 18, Ln. 65-67 & Col. 19, Ln. 1-2), when the predetermined amount of toner remains in the remanufactured toner cartridge (Sakai, paragraph [0068], Ln. 3).” The combination of Sakai et al. and Honda et al. do not teach, “a replacement electronic circuit for use on a remanufactured toner cartridge.” However, a replacement electronic circuit for use on a remanufactured toner cartridge is routine in the art as shown by Isoabe et al. (see paragraph [0021], Ln. 2-4). It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify the combination of Sakai et al. and Honda et al.’s inventions to include an electronic circuit that is a replacement circuit, for use on a remanufactured toner cartridge.

The ordinary artisan would have been motivated to modify the combination of Sakai et al. and Honda et al.’s inventions in a manner described above for at least the purpose of delaying developer usage to make its use more available.

Regarding claim 18, Sakai et al. teach, “wherein the electronic circuitry alters the amount of toner consumed by replacing the stored value controlling the voltage applied to the at least one of the electrical development components with a new value controlling the voltage applied to the at least one of the electrical development components (paragraph [0068], Ln. 3).”

Regarding claim 19, Sakai et al. teach, "wherein the electronic circuitry reduces the amount of toner consumed to form images by increasing the voltage applied to a primary charge roller and decreasing the voltage applied to a developer roller (paragraph [0089])."

Regarding claim 20, Sakai et al. teach, "wherein the electronic circuitry increases the amount of toner consumed to form images by decreasing the voltage applied to a primary charge roller and increasing the voltage applied to a developer roller (paragraph [0089])."

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

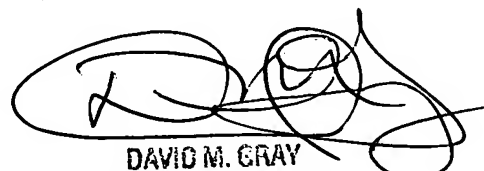
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan D. Walsh whose telephone number is 571-272-2726. The examiner can normally be reached on M-F 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Arthur Grimley can be reached on 571-272-2136. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ryan D. Walsh  
Patent Examiner  
Art Unit 2852



DAVID M. GRAY  
PRIMARY EXAMINER